MOTOROLA SOLUTIONS

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PDR8000®

Ordering Guide





Revision 4.3

May 2024

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Important Notes

1. **Custom Filtering:** Only the frequency plans shown in this ordering guide are available as standard configurations. For custom filtering, please contact a Sales Solution Specialist for assistance.

2. **Frequencies Required:** PDR8000® frequencies must be specified when placing an order. If a duplexer is ordered, it is custom tuned and cannot be re-tuned in the field.

3. **Delivery Time:** Standard PDR8000® delivery time is 22-24 weeks after receipt of a purchase order and a valid frequency plan. Frequency information must be accurate and in accordance with the frequency plan requirements described in this document in order to avoid delays.

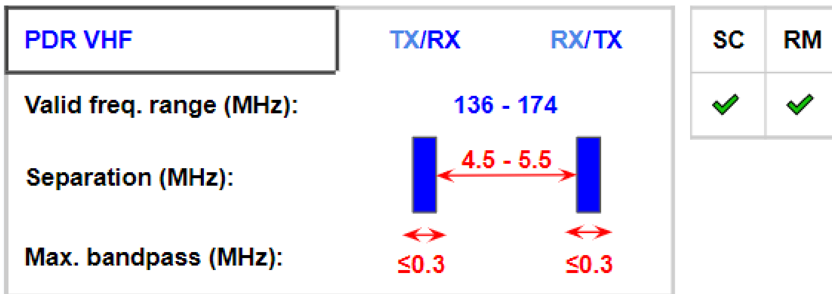
4. **Duplexer:** Duplexer is not mandatory and the 'No Duplexer' option can be chosen when full duplex capability is not desired.

5. **Power Cables:** PDR8000® suitcase models include standard AC & DC Power Cables. Customer must provide their own 12VDC power supply for PDR8000® rackmount which is designed to fit into a standard 19" rack.

How to Interpret a Frequency Plan Diagram

Below is an example of a frequency plan with the set of rules that must be met for it to be a valid selection.

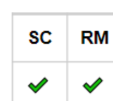
Frequency Plan Examples

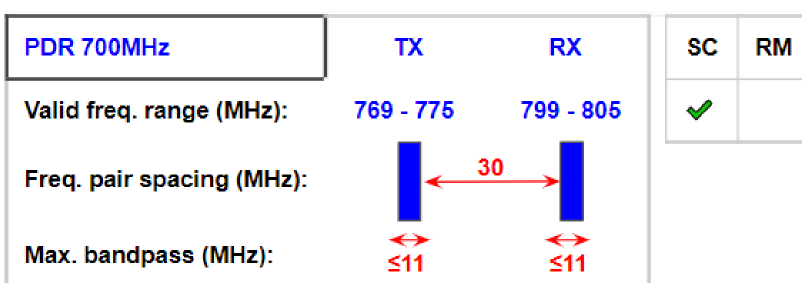


- Ensure the PDR8000 frequencies are within the **Valid frequency range (MHz)**
    - **PDR Tx/Rx 136-174**

- Ensure the **Separation (MHz)** frequency requirements are met
    - **at least 4.5MHz and no more than 5.5MHz** between the highest Tx and the lowest Rx frequencies when Tx is lower than Rx OR
    - **at least 4.5MHz and no more than 5.5MHz** between the highest Rx and lowest Tx frequencies if Rx is lower than Tx)

- The provided Tx and Rx frequencies are used as the center frequency. Ensure that any additional Tx/Rx frequencies do not exceed the **Maximum bandpass (MHz)**
    - difference between the lowest and highest programmed Tx frequencies must be less than or equal to **0.3MHz**
    - difference between the lowest and highest programmed Rx frequencies must be less than or equal to **0.3MHz**
- Each frequency plan identifies the repeater mount type that is it compatible with
    - Suitcase (**SC**)- check mark indicates supported
    - Rackmount (**VM**)- check mark indicates supported





- For 700MHz and 800MHz, there is a **Frequency pair spacing** requirement instead of separation
    - each Tx-Rx frequency pair must be exactly **30MHz** apart

Preparing a Quote Without Customer Frequencies

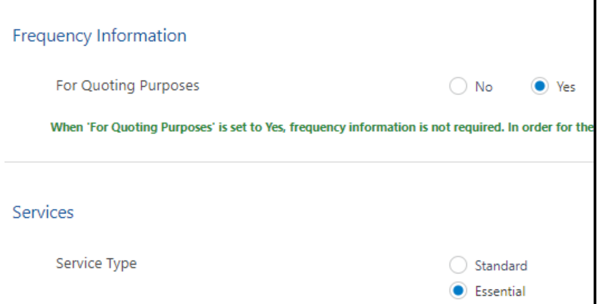
If preparing a quote before customer frequencies are known, please use the following:

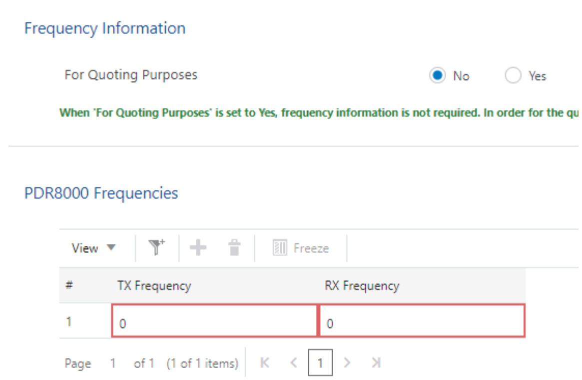
Frequency Band (MHz)	Duplexer	Transmit Frequency (MHz)	Receive Frequency (MHz)
700	700MHz	770	800
800	800MHz	855	810
VHF	VHF	136	141
UHF 380-450	UHF 380-430MHz (9.5-10.5MHz Tx to Rx Separation)	380	390
UHF 450-470	UHF 450-470MHz	450	455

NOTE: This will allow the quoting process to continue but the order cannot be placed until the exact frequencies have been entered.

OR

Use the “**For Quoting Purposes**” field and set it to “**Yes**”.

<table>
<tr>
<td>When “Yes” is selected, no PDR8000 frequencies need to be entered to create a quote.</td>
<td>To finalize the quote before moving to an order, select “No”, and fill in the frequency information.</td>
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<tr>
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</table>

Selecting a Frequency Plan

Standard Frequency Plans

When the customer frequencies are known, follow the specified frequency requirements in the set of standard frequency plan diagrams.

Custom Frequency Plans

When customer frequencies cannot meet all of the requirements of a standard frequency plan, this is a custom request. Please contact a [Sales Solution Specialist](#) to determine if a custom frequency plan is viable. If viable, a per unit custom charge is applicable.

Standard Frequency Plans

Frequency Band	Frequency Requirements	Suitcase (SC)	Rackmount (RM)
700MHz	• 30MHz Frequency Pair Spacing • 11MHz max bandpass	Yes	
800MHz	• 45MHz Frequency Pair Spacing • 10MHz max bandpass	Yes	
VHF	• 4.5-5.5MHz Tx to Rx separation • 0.3MHz max bandpass	Yes	Yes
UHF 380-430MHz	• 9.5-10.5MHz Tx to Rx separation • 0.3MHz max bandpass	Yes	Yes
UHF 380-430MHz	• 4.5-5.5MHz Tx to Rx separation • 0.3MHz max bandpass	Yes	Yes
UHF 450-470MHz	• 4.5-5.5MHz Tx to Rx separation • 0.3MHz max bandpass	Yes	Yes

Frequency Plans: 700MHz, 800MHz, VHF

PDR 700MHz	TX	RX
Valid freq. range (MHz):	768* - 775	798** - 805
Freq. pair spacing (MHz):	30	
Max. bandpass (MHz):	≤11	≤11

SC	RM
✓	

* 768 in Canada
769 in US
** 798 in Canada
799 in US

PDR 800MHz	RX	TX
Valid freq. range (MHz):	806 - 824	851 - 869
Freq. pair spacing (MHz):	45	
Max. bandpass (MHz):	≤10	≤10

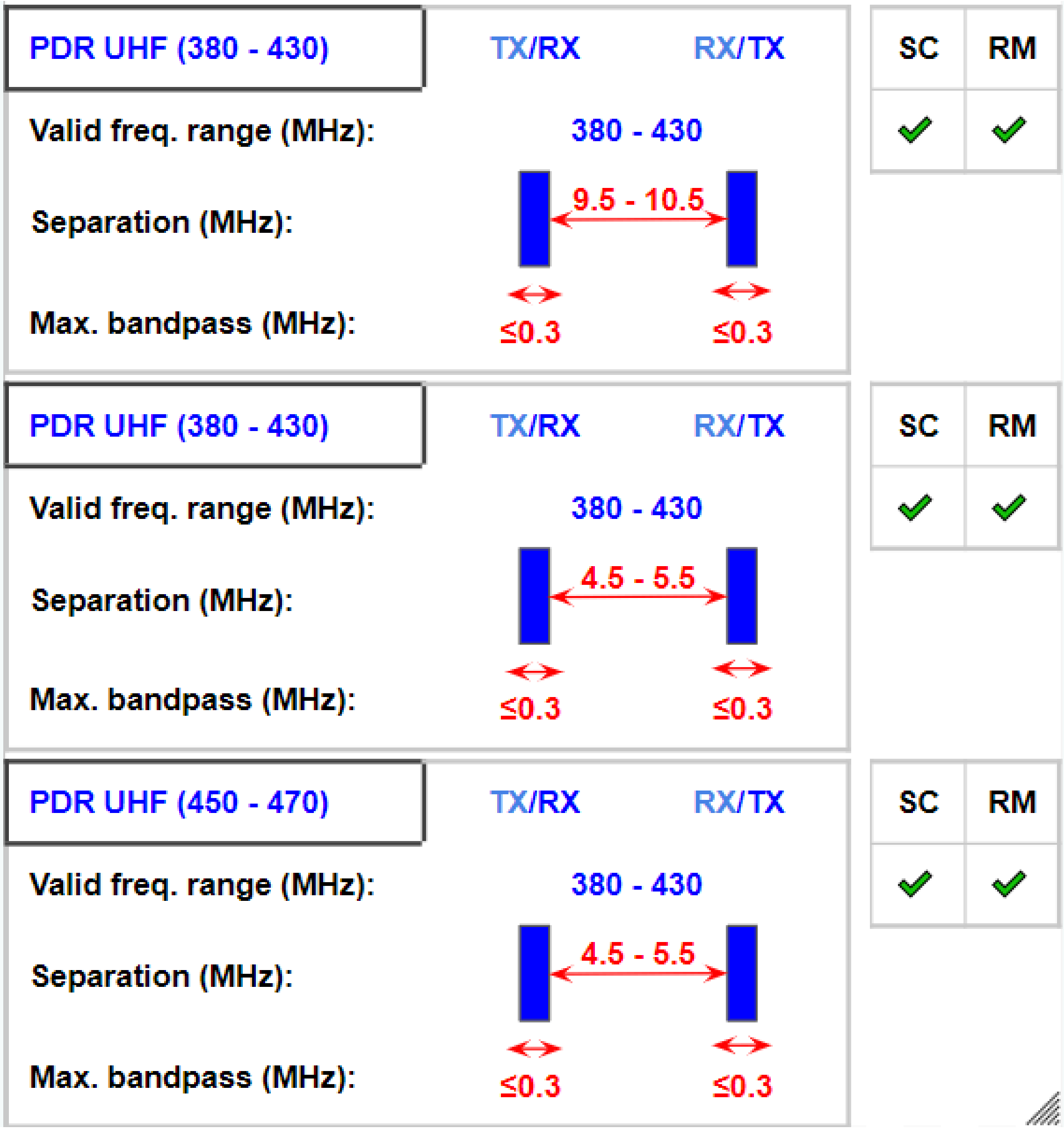
SC	RM
✓	

PDR VHF	TX/RX	RX/TX
Valid freq. range (MHz):	136 - 174	
Separation (MHz):	4.5 - 5.5	
Max. bandpass (MHz):	≤0.3	≤0.3

SC	RM
✓	✓

Note: For Simplex applications, the same Tx/Rx frequency can be used and the frequency pair spacing/separation rules do not apply.

Frequency Plans: UHF 380-430MHz, UHF 450-470MHz



Note: For Simplex applications, the same Tx/Rx frequency can be used and the frequency pair spacing/separation rules do not apply.

Main Models: Dropship to New Part Numbers Mapping

The table below shows the mapping between the old dropship part numbers and the new model and option numbers. To compare a new quote to an older quote with dropship part numbers, each dropship number will map to the following:

- Main Model
  - Duplexer (if applicable)
  - Custom Duplexer (if applicable)
  - Suitcase color
  - V.24/Deployment Profiles/DFSI (if applicable)

Common Options	Dropship #	New Option #	Applicable Product
Custom Duplexer	TT06580AA	QA09537AA	Suitcase & Rackmount All Bands
Suitcase Color- Black	TT06281AA	QA09646AA	Suitcase All Bands
Suitcase Color- Yellow	TT06252AA	QA09647AA	Suitcase All Bands
V.24 Wireline Operation	TT06253AA	QA09657AA	Suitcase & Rackmount All Bands
Deployment Profiles Capability	TT06319AA	QA09637AA	Suitcase & Rackmount All Bands
DFSI Operation	TT06582AA	QA09638AA	Suitcase & Rackmount All Bands
VHF 50W Amplifier	TT03936A	QA09640AA	Rackmount VHF
UHF 380-430MHz 50W Amplifier	TT3937A	QA09641AA	Rackmount UHF 380-430MHz (Not for sale in Canada)
UHF 450-470MHz 50W Amplifier	TT3938A	QA09642AA	Rackmount UHF 450-470MHz (Not for sale in Canada)
Alarm Capability	TT3935A	QA09608AA	Rackmount All Bands

700MHz	Dropship #	Main Model	Suitcase or Rackmount Option	Duplexer Option
Suitcase + No Duplexer	TT3152A + TT06261AA	T93USS9PW1AN	QA09644AA	
Suitcase + Duplexer	TT3152A + TT06259AA			QA09655AA or QA09656AA (based on approx qty)

800MHz	Dropship #	Main Model	Suitcase or Rackmount Option	Duplexer Option
Suitcase + No Duplexer	TT3153A + TT06261AA	T93VSS9PW1AN	QA09644AA	
Suitcase + Duplexer	TT3153A + TT06260AA			QA09660AA or QA09661AA (based on approx qty)

VHF	Dropship #	Main Model	Suitcase or Rackmount Option	Duplexer Option
Suitcase + No Duplexer	TT3148A + TT06261AA	T93KSS9AW1AN	QA09643AA	
Suitcase + Duplexer	TT3148A + TT06254AA			QA09650AA
Rackmount + No Duplexer	TT4079A + TT06583AA		Depending on combination of Duplexer, PA and Alarm, one of the following: QA09645AA QA09677AA QA09688AA QA09669AA QA09670AA QA09671AA QA09672AA QA09673AA	
Rackmount + Duplexer	TT4079A + TT06584AA			QA09650AA + QA09770AA

UHF 380-430MHz	Dropship #	Main Model	Suitcase or Rackmount Option	Duplexer Option
Suitcase + No Duplexer	TT3149A + TT06261AA	T93PSS9PW1AN	QA09643AA	
Suitcase + Duplexer 9.5-10.5MHz TxRx Sep	TT3149A + TT06255AA			QA09650AA
Suitcase + Duplexer 4.5-5.5MHz TxRx Sep	TT3149A + TT06256AA			
Rackmount + No Duplexer	TT4080A + TT06583AA		Depending on combination of Duplexer, PA and Alarm, one of the following: QA09645AA QA09677AA QA09688AA QA09669AA QA09670AA QA09671AA QA09672AA QA09673AA	
Rackmount + Duplexer 9.5-10.5MHz TxRx Sep	TT4080A + TT06585AA			QA09650AA + QA09771AA
Rackmount + Duplexer 4.5-5.5MHz TxRx Sep	TT4080A + TT06586AA			

UHF 450-470MHz	Dropship #	Main Model	Suitcase or Rackmount Option	Duplexer Option
Suitcase + No Duplexer	TT3150A + TT06261AA	T93RSS9PW1AN	QA09643AA	
Suitcase + Duplexer	TT3150A + TT06257AA			QA09651AA or QA09652AA (based on approx qty)
Rackmount + No Duplexer	TT4081A + TT06583AA		Depending on combination of Duplexer, PA and Alarm, one of the following: QA09645AA QA09677AA QA09688AA QA09669AA QA09670AA QA09671AA QA09672AA QA09673AA	
Rackmount + Duplexer	TT4081A + TT06587AA			QA09651AA or QA09652AA (based on approx qty) + QA09771AA

Standalone Accessories

Feature Licenses

NOTES: All serial numbers must be provided at the time of order.
Feature license(s) are not transferable between units and if a feature license file(s) is lost, it must be re-purchased.

Name	**Description**	**Option #** **(Old Dropship#)**
V.24 Wireline	Enable V.24 wireline operation Supports P25 Digital channels only	HKVN4983A (DDN2634A)
Deployment Profiles Capability	PDR8000® can be programmed with up to ten different Deployment Profiles, each uniquely defining the operational characteristics of the PDR8000®.	HKVN4982A (DDN2633A)
DFSI Operation	Provides P25 standard IP wireline fixed station interface. DFSI Protocol Version 1 on the Ethernet interface. Supports P25 Digital, Analog and Mixed-Mode channels	HKVN4981A (DDN3285A)

Cables

NOTE: Additional information (serial number) is required when submitting an order for an Auxiliary Cable. Refer to section **When Additional Information Is Required for a Standalone Accessory** for more information

Name	**Description**	**Option #** **(Old Dropship#)**
Programming Cable	For use with suitcase and rackmount models **Details:** USB A to USB B, 10ft (PN AK672-3-R)	VKN0039A (DDN9025A)
Auxiliary Cable SPARE	For use with suitcase model Provides control between the PDR8000® and a Booster Pack **Details:** 8-Pin on PDR8000® end for R4.0 and newer (PN 7W088X12-02) **NOTE:** For Required Order Information, when ordering a spare cable at the same time as the main PDR8000 unit, use the serial number 12345678	VKN0023A (DDN2333A)
AC Power Cable SPARE	For use with suitcase model **Details:** 6ft (PN NKPF-515-D-2)	VKN0019A (DDN2300A)
DC Power Cable SPARE	For use with suitcase battery backup (VPN0001A) **Details:** 8ft (PN 7W088X11-01)	VKN0020A (DDN2301A)
DC Power Cable-Unterminated SPARE	For use with suitcase model **Details:** 8ft (PN 7W088X11-02)	VKN0021A (DDN2332A)

Suitcase Accessories

NOTE: Additional information (serial number) is required when submitting an order for a Booster Pack. Refer to section **When Additional Information Is Required for a Standalone Accessory** for more information.

NOTE: For Required Order Information, when ordering a Booster Pack at the same time as the main PDR8000 unit, use the serial number 12345678.

Name	Description	Option # (Old Dropship#)
VHF Booster Pack	Includes Auxiliary Cable which provides control between the PDR8000® and a Booster Pack ● 8-Pin on PDR8000® end (PN 7W088X12-02)	VTD0001A (DDN2732A)
UHF 380-430MHz Booster Pack Not available for sale in Canada	Includes Auxiliary Cable which provides control between the PDR8000® and a Booster Pack ● 8-Pin on PDR8000® end (PN 7W088X12-02)	VTE0003A (DDN2733A)
UHF 450-470MHz Booster Pack Not available for sale in Canada	Includes Auxiliary Cable which provides control between the PDR8000® and a Booster Pack ● 8-Pin on PDR8000® end (PN 7W088X12-02)	VTE0005A (DDN2734A)
700/800MHz Booster Pack Not available for sale in Canada	Includes Auxiliary Cable which provides control between the PDR8000® and a Booster Pack ● 8-Pin on PDR8000® end (PN 7W088X12-02)	VTF0001A (DDN2735A)
Suitcase Battery Backup	Includes Universal Charger Includes DC Power Cable (PN 7W088X11-01) **Battery Lifetime:** 7.5hrs for PDR8000® or 3.5hrs for Booster Pack (50:50 TX-RX Duty Ratio)	VPN0002A (DDN2336A)
Battery Backup Charger		VPN0001A (DDN2334A)
Zippered Pouch	For accessory cables (PN 3Y088B01-01)	VLN0001A (DDN2335A)

Suitcase Mag Mount Antennas- Unity Gain (0dBd)

Name	Description	Option # (Old Dropship#)
VHF Unity Gain Mag Mount Antenna	136 – 174MHz	VAD0003A (DDN9014A)
UHF Unity Gain Mag Mount Antenna	380 – 520MHz	VAE0003A (DDN9015A)
700/800MHz Unity Gain Mag Mount Antenna	764 – 869MHz	VAF0003A (DDN9016A)

Suitcase Duplexers

NOTE: Additional information (frequencies) is required when submitting an order for a duplexer. Refer to section **When Additional Information Is Required for a Standalone Accessory** for more information

Name	Description	Option # (Old Dropship#)
700MHz Duplexer SPARE	• 30MHz Frequency Pair Spacing • 11MHz max bandpass	VFE0010A (DDN2318A)
800MHz Duplexer SPARE	• 45MHz Frequency Pair Spacing • 11MHz max bandpass	VFE0011A (DDN2319A)
VHF Duplexer SPARE	• 4.5-5.5MHz Tx to Rx Separation • 0.3MHz max bandpass	VFD0020A (DDN2313A)
UHF 380-430MHz Duplexer SPARE	• 9.5-10.5MHz Tx to Rx Separation • 0.3MHz max bandpass	VFE0012A (DDN2314A)
UHF 380-430MHz Duplexer SPARE	• 4.5-5.5MHz Tx to Rx Separation • 0.3MHz max bandpass	VFE0013A (DDN2315A)
UHF 450-470MHz Duplexer SPARE	• 4.5-5.5MHz Tx to Rx Separation • 0.3MHz max bandpass	VFE0009A (DDN2316A)
Custom Duplexer SPARE	Any band	VFN0015A

Training

Name	Description	Option # (Old Dropship#)
Basic Training (1 Day)	Includes soft copy of training materials. Customized training available subject to content and price negotiation. **Training the Trainer/End User** Provides a general overview of Mobile Repeater solutions with respect to the agency's particular use case. Best practices highlighted for common deployment scenarios. Participants will receive hands-on training for practical operation and control. **Requirements:** a minimum of 1 PDR8000®. **OR** **Technical and Programming Training** Provides radio technicians an in-depth understanding on how the PDR8000® is integrated into the everyday operation of the agency. Focuses on code plug compatibility, Futurecom Repeater Configurator (FRC) software functionality and programming for optimal end user experience. **Requirements:** a minimum of two fully functioning Portable radios (PSUs) programmed to the PDR8000® and one PDR8000®. **Requirement:** Contact debra.oster@motorolasolutions.com or maria.tabladillo@motorolasolutions.com from the Worldwide Education organization to coordinate a training session. Please note that the lead time is ~180 days.	PSV01S04246A (DDN3699A)
Extended Training	1 additional day of on-site and/or virtual training **Requirements:** Basic Training	PSV01S04247A (DDN3700A)

Warranties

NOTE: Warranties can be ordered as standalone up to 90 days after product purchase through after the fact purchase process.

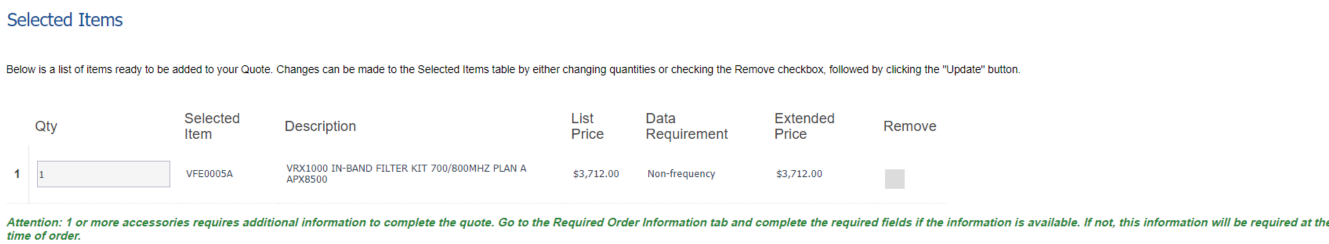
Name	Description	Option #
Essential Services	Available for suitcase and rackmount 3/5/7 year duration	LSV01S04107A
Essential Services with Accidental Damage	Available for suitcase; 3/5/7 year duration	LSV01S04110A

When Additional Information Is Required for a Standalone Accessory

Step 1. Search for the Standalone Item from the Product Selection page or from the Quote page

Step 2. Select the item and enter a quantity. A reminder appears below the item when additional information is required.

Example Screenshot



Step 3. At the top left of the page, there is a tab for REQUIRED ORDER INFORMATION where the additional information (frequencies or serial numbers) must be entered. The valid range and format for each value is indicated in the Help text provided for each.

NOTE 1: There is a delay of approx 20 seconds after entering each value. This is a known issue and the team is working to address this as quickly as possible.

NOTE 2: When selecting multiple standalone accessories to add to a quote, select all items before filling in the Required Order Information. The Text Values will not line up with the correct Item numbers if items are added after values are entered.

Example Screenshot

